

ABSTRACT OF THE DISCLOSURE

TORQUE SENSING APPARATUS AND METHOD

A torque sensor comprising a shaft of magnetostrictive material; a pair of magnets
5 having oppositely sensed poles positioned circumferentially around the shaft so as to induce a localized magnetic field in the shaft between the poles. A torque applied to the shaft is sensed by a flux detector positioned circumferentially between the magnet poles so as to detect a component of the localized magnetic field which escapes from the shaft as a result of the torque. With this design, there is no need to permanently
10 magnetize the shaft or a collar attached to the shaft, as in the prior art. The prior art manufacturing step of permanently magnetizing the collar or its shaft is also thus eliminated, greatly simplifying the manufacturing.